A.D. 1871, 10th *March*. N° 637.

SPECIFICATION

OF

JOHN CHAMPNEY BOTHAMS.

PIPES FOR SEWAGE, &c.

LONDON:
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A.D. 1871, 10th March. N° 637.

Pipes for Sewage, &c.

LETTERS PATENT to John Champney Bothams, of Salisbury, in the County of Wilts, Civil Engineer, for the Invention of "Improvements in the Construction of Pipes for the Conveyance of Sewage or other Fluids."

Sealed the 5th September 1871, and dated the 10th March 1871.

PROVISIONAL SPECIFICATION left by the said John Champney Bothams at the Office of the Commissioners of Patents, with his Petition, on the 10th March 1871.

I, John Champney Bothams, of Salisbury, in the County of Wilts, Civil Engineer, do hereby declare the nature of the said Invention for "Improvements in the Construction of Pipes for the Conveyance of Sewage or other Fluids," to be as follows:—

Socket pipes are generally made with the internal diameter of the socket larger than the external diameter of the spigot end of the pipe, so as to allow a space for the insertion of the materials with which the pipes are joined one to another.

In laying or uniting socketted pipes, when the spigot end of one pipe is placed in the socket of another pipe this space allows the spigot end of the pipe to sink until it obtains a support on the lower inner surface of the socket into which it is placed, thereby preventing the pipes at their junction from being concentric.

My Invention relates to an improved construction of socketted pipes, such as are employed for the conveyance of sewage or other fluids, and is applicable to either earthenware or metal pipes, or to pipes made of other piping material, and the Invention consists in adding to the pipes in the lower part of the socket, and also on the outer side surface of the spigot end of the pipes, at equidistant points, two or more pieces of the same material that the pipes are made of, in size equal to about half the depth of the socket in thickness from the side of the socket, and from the side of the pipe, a trifle more than half the width of space left for the joint; the pieces in the socket being flat, or nearly so, on the surface, which is parallel to the length of the pipe, and the pieces which are on the spigot end of the pipe being about half an inch wide on the surface which is parallel to the length of the pipe, and sloped off on both sides to meet the circumference of the pipe. The effect of the addition to the pipes of these pieces being, that when pipes are placed one in another, by causing one of the pipes (the pipe being placed) to revolve on its axis in either direction until the projecting pieces on the spigot end of the pipe come firmly in contact with the pieces in the socket, the spigot end of the one pipe will become concentric with the socket of the pipe into which it is placed, and will be supported in that position, and the pipes will then be ready to be joined in the usual manner, so as to prevent leakage.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Champney Bothams in the Great Seal Patent Office on the 9th September 1871.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN CHAMPNEY BOTHAMS, of Salisbury, in the County of Wilts, Civil Engineer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Tenth day of March, in the year of our

Lord One thousand eight hundred and seventy-one, in the thirty-fourth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Champney Bothams, Her special licence that I, the said John Champney Bothams, my executors, administrators, and assigns, or such others as I, the said John Champney Bothams, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN THE CONSTRUCTION OF PIPES FOR THE CONVEYANCE OF SEWAGE OR OTHER FLUIDS," upon the condition (amongst others) that I, the said John Champney Bothams, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of my said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Champney Bothams, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement in writing, and on reference being had to the accompanying Sheet of Drawings, that is to say:—

Socket pipes are generally made with the internal diameter of the socket larger than the external diameter of the spigot end of the pipe, so as to allow a space for the insertion of the materials with which the pipes are joined.

In laying or uniting socketted pipes so constructed, when the spigot end of one pipe is placed in the socket of another pipe this space compels the spigot end of the pipe to rest on the lower inner surface of the socket into which it is placed, thereby preventing the pipes at their junction from being concentric.

My Invention relates to an improved construction of socketted pipes, such as are employed for the conveyance of sewage or other fluid matters, and is applicable to either earthenware or metal pipes, or to pipes made of other piping material, and the Invention consists in adding to the pipes in the inner part of the socket, and also on the outer side surface of the spigot end of the pipes at equidistant points in the circumference one, two, or more guide pieces of the same material that the pipe is made of, in size equal to about half the depth of the socket in thickness from the side of the socket and from the side of the pipe, averaging a trifle more than half the width of space left for the joint of the pipes. The guide pieces in the socket are flat, or nearly so, on the surface, which is parallel to the length of the pipe, and the guide pieces on the spigot end of the pipe are about half an inch wide on the surface, which is also parallel to the length of the pipe, and sloped off on both sides to meet the circumference of the pipe. The guide pieces on the spigot end of the pipe may, if required, be extended the whole length of the pipe; or these outer guides may be formed by fluting the pipe externally and internally, either in the direction of its length, or in a slightly spiral direction, the flutings being equidistant and in number the same as, or a multiple of, the number of guide pieces in the socket. The effect of the addition to the pipes of these pieces is that when the pipes are placed one in another by causing one of the pipes to revolve on its axis in either direction until the projecting guide pieces on the spigot end of the pipe come firmly in contact with the pieces in the socket, the spigot end of the one pipe will become concentric with the socket of the pipe into which it is placed and will be supported in that position, and the pipes will then be ready to be joined in the usual manner, so as to prevent leakage. When the pipes are fluted internally by giving a slight spiral direction to the flutings there will be a tendency for the sewage or other matters flowing through the pipes to revolve and prevent the settlement of solid matter.

On the accompanying Sheet of Drawings Figure 1 represents an oblique elevation of the improvements as applied to a nine inch socketted pipe, and Figures 2 and 3, end views of the spigot end *d* of the pipe placed in the socket *e* of another.

a, *a*, represent the guide pieces in the socket, and *b*, b^1, (Figure 1,) the guide pieces on the spigot end, which may be either short, as shown at *b*, or lengthened, as dotted at b^1, *c*; Figure 2 is a section through the spigot end of the pipe, and Figure 3 represents the guide pieces *f*, *f*, *f*, on the spigot end, as formed by fluting the interior and exterior of the pipe, either in the direction of the length or in a slightly spiral direction, which latter has a tendency to prevent any solid matter being deposited as the sewage or other matters are traversing the pipes.

Having now described the nature and object of my said Invention for "Improvements in the Construction of Pipes for the Conveyance of Sewage or other Fluids," together with the manner in which the same is to be or may be performed or carried into practical effect, I would remark in conclusion that I claim as my Invention the new or improved construction of socketted pipes for the purposes herein-before set forth, substantially as herein described and as illustrated on the accompanying Sheet of Drawings, or any mere modification thereof, the principle of the Invention consisting in placing guide pieces in the socket and on the spigot end of the pipes, so that when they are placed one within another, and one of them partially revolved, the guide pieces in the socket and on the spigot end of the pipe shall come in contact with and rest firmly against each other, and so keep the pipes at their joints concentric with one another.

In witness whereof, I, the said John Champney Bothams, have hereunto set my hand and seal, this Fifth day of September, in the year of our Lord One thousand eight hundred and seventy-one.

JOHN CHAMPNEY BOTHAMS. (L.S.)

LONDON:
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A.D. 1871, Mar. 10, N° 637,
BOTHAMS' Specification.

(1 SHEET)

*Oblique Elevation of a 9 inch Socketed Pipe,
Shewing 2 of the Guide Pieces (a.a) in the Socket, and 2 of the Guide
Pieces on the Spigot end, short as (b.b) or lengthened as (b.c).*

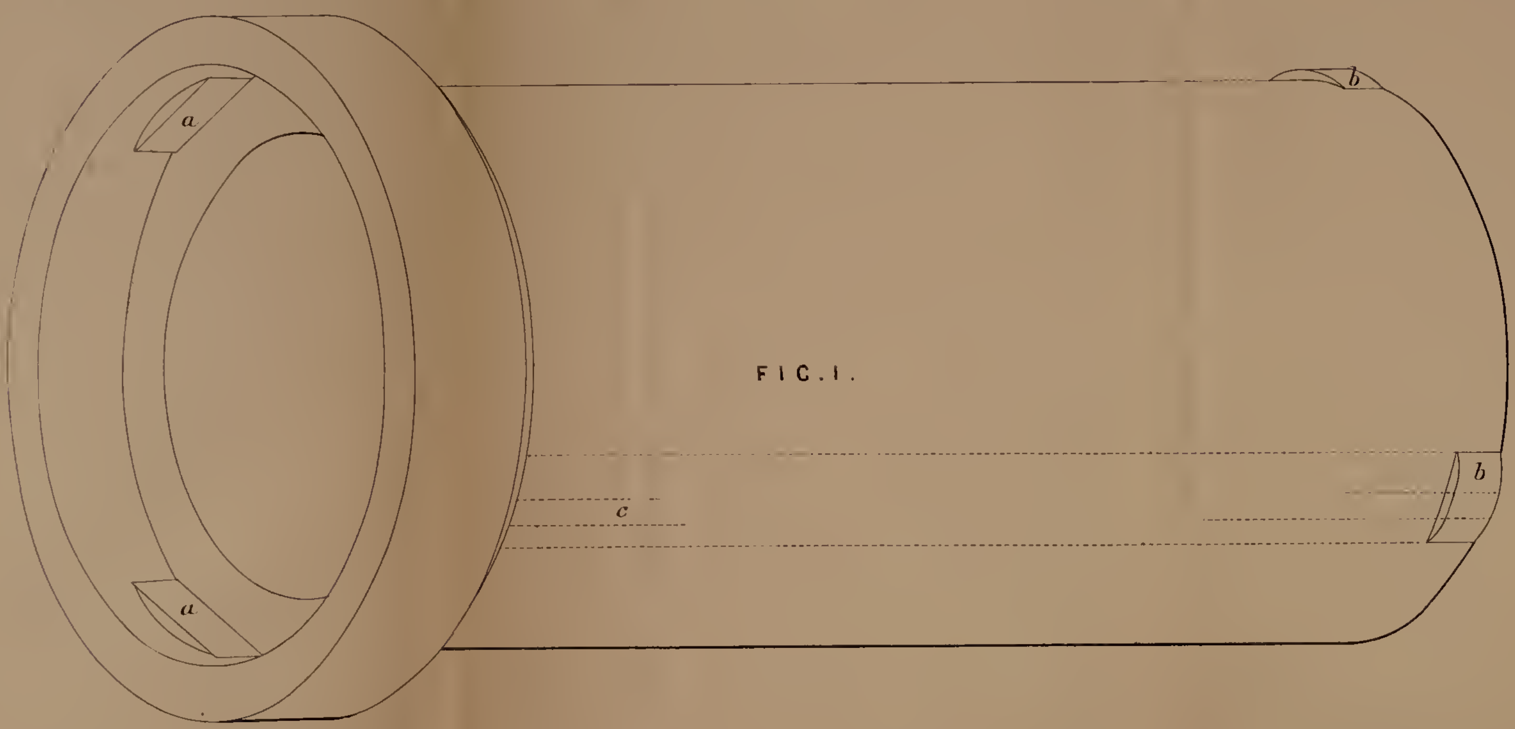
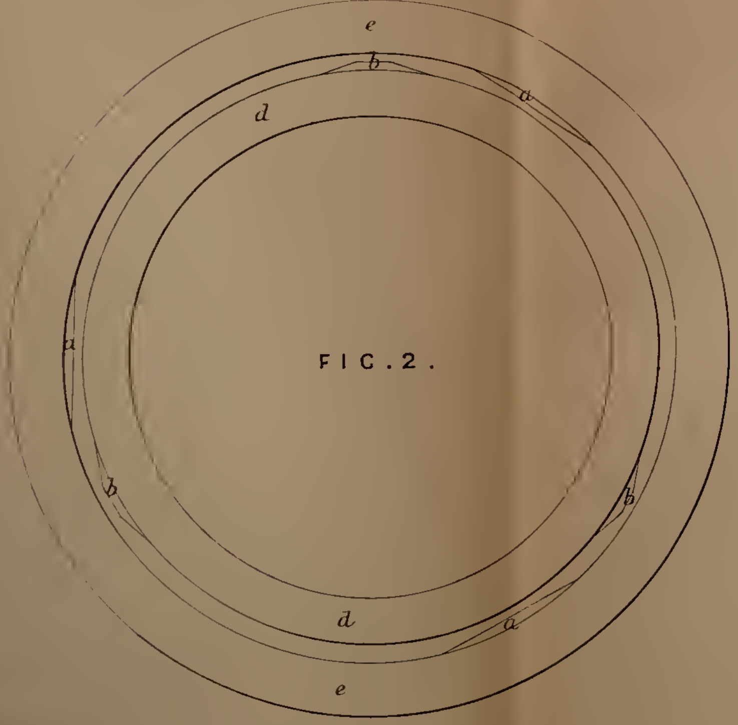
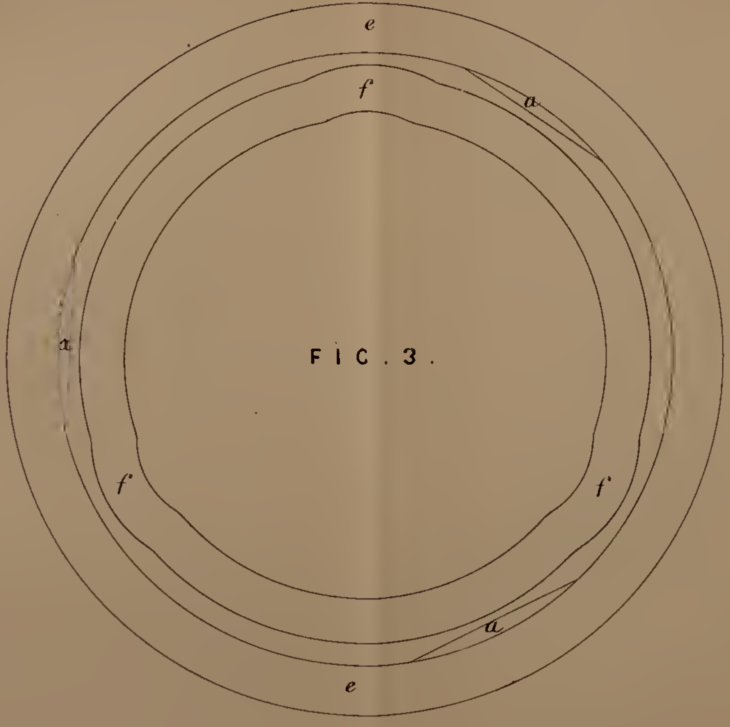


Fig. 2. Section d. d. through the Spigot end of a 9 inch Pipe placed in the Socket end e. e. of a 9 inch Pipe—shewing the Guide Pieces b. b. b. on the Spigot end and the Guide Pieces a. a. a. in the Socket end of the Pipe

Fig. 3. Plan of the Socket end of a 9 inch Pipe with the Guide Pieces a. a. a.— and the Section f. f. f. through a 9 inch Pipe the projecting Guides being formed by the fluting the pipe in the direction of its length as at f. f. f.





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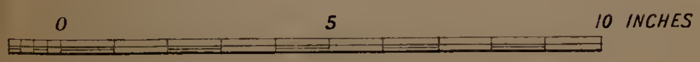

The tiled drawing is partly colored.

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